

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2005/050067

International filing date (day/month/year)
13.05.2005

Priority date (day/month/year)
15.06.2004

International Patent Classification (IPC) or both national classification and IPC
H01L21/00

Applicant
NANOBEAM LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITYInternational application No.
PCT/GB2005/050067**10/550077****Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/050067

Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-43
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-43
Industrial applicability (IA)	Yes: Claims	1-43
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

1 Reference is made to the following documents:

D1 : EP 0 840 355 A (NISSIN ELECTRIC CO., LTD) 6 May 1998 (1998-05-06)

D2 : PATENT ABSTRACTS OF JAPAN vol. 007, no. 123 (E-178), 27 May 1983 (1983-05-27) - & JP 58 040759 A (TOKYO SHIBAURA DENKI KK), 9 March 1983 (1983-03-09)

2 INDEPENDENT CLAIM 1

Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document, see fig.1):

A charged particle beam system including a main chamber (30), an exchange chamber (62) and a substrate handling device (32,40) mounted inside the main chamber (30) for loading and unloading a substrate (2) into and out of the main chamber (30), the device comprising a bar (40) and a side member (32) extending laterally (see fig.2,3) from the bar (40) for supporting the substrate (2) to one side of the bar (40) and means (46) configured such that the side member (32) is movable into and out of the exchange chamber (62)

The subject-matter of claim 1 differs in that :
means are provided for translating the bar along its longitudinal axis.

The problem to be solved by the present invention may therefore be regarded as :
rendering possible the movement of the side member into and out of the exchange chamber.

It is however generally known to the person skilled in the art that a side member translatable along a bar (as described in D1) is an equivalent to a side member fixed on a bar that is translatable along its longitudinal axis (see in that respect D2, fig.1-4) and can be interchanged with that feature where circumstances make it desirable.

Therefore, the solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

3 INDEPENDENT CLAIMS 38,39,40,43

The same reasoning as for independent claim 1 applies for independent claims 38,39,40,43 and therefore, the solution proposed in those claims of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

4 DEPENDENT CLAIMS 1-37,41,42

Dependent claims 1-37,41,42 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT).

These claims refer to mechanical details very well known to the person skilled in the art. It is a normal procedure to include these features in the device described in the independent claims in order to render its construction possible.

Re Item VIII.

Although claims 1,38,39,40 and 43 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. Hence, claims 1,38,39,40 and 43 do not meet the requirements of Article 6 PCT (conciseness).